User / Service Manual

Cutter

Chapter 0 General

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Note: Please follow the notes shown in this text - it will help to cover all situations and keep your engine working.

If in the manual is used the name TTX 650 - it is as well meant the TTX 450 and TTX 950 the Puma and Tiger or the S 45 and S 95 !

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Chapter 1 Initiation

Unpack

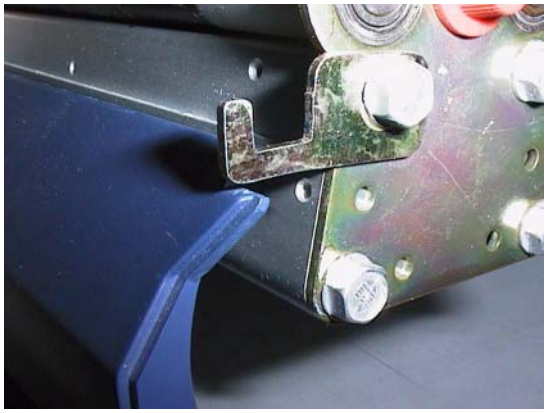
- remove packing parts - take care of documentation and parts
- remove option from packaging

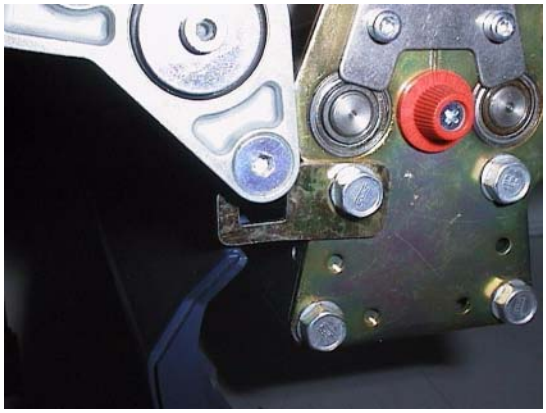
Assemble Option

- mount the cutter option to the fixing points shown on the picture (use the 2 hexagonal screws M 5x20)

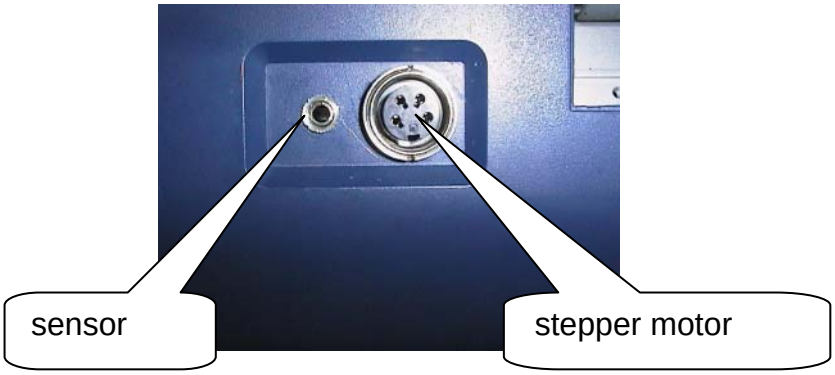
- if the printer is equipped with a infeed or a rewind unit - disassemble the unit (by loosen the 2 screws)
- the two screws can be used as well

- to fix the cutter option in the correct position - there is mounted a pick up plate on the outer side of the printer
- the axle of the knife must fit into this pick up plate
- the plate can be adjusted to adjust the print out and the cut parallel





- connect the stepper motor cable to the front connector - screw it correctly
- connect the sensor cable to the remaining connector at the front plate

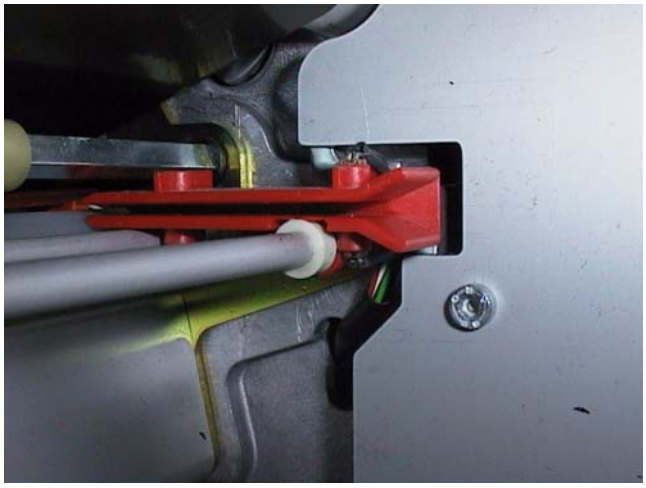


Attention: All option have to use a printer with mounted option board - together with the necessary wiring!

Chapter 2 Set up mode

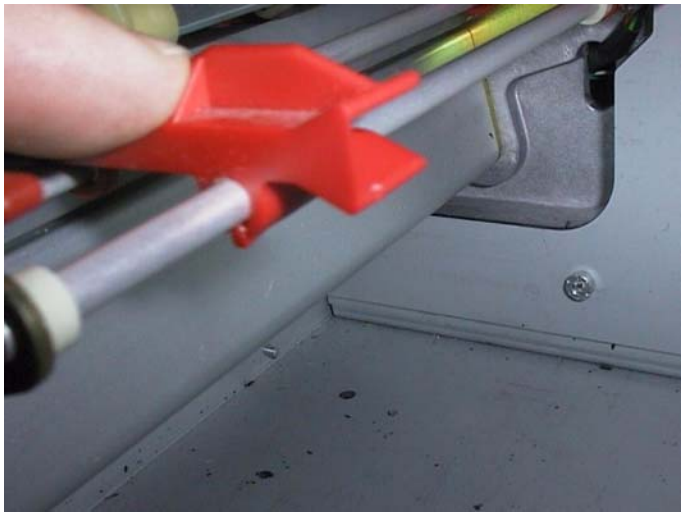
Adjust media width

- reasoned by different media width - the guiding of the printer has to be adjusted the label should not be wedged



- the inner guide is fixed to the zero line of the printer and should not be touched

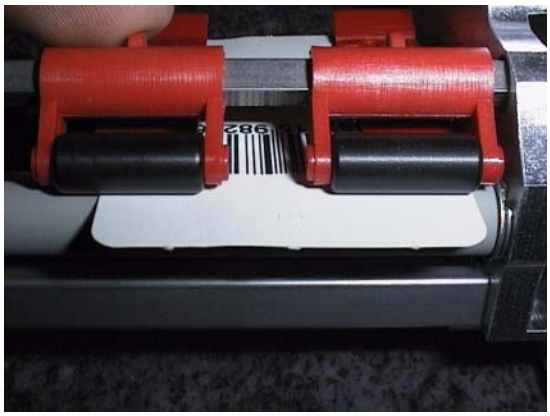
- the outer guide should be moved to the necessary position - the media should move easy through the guides



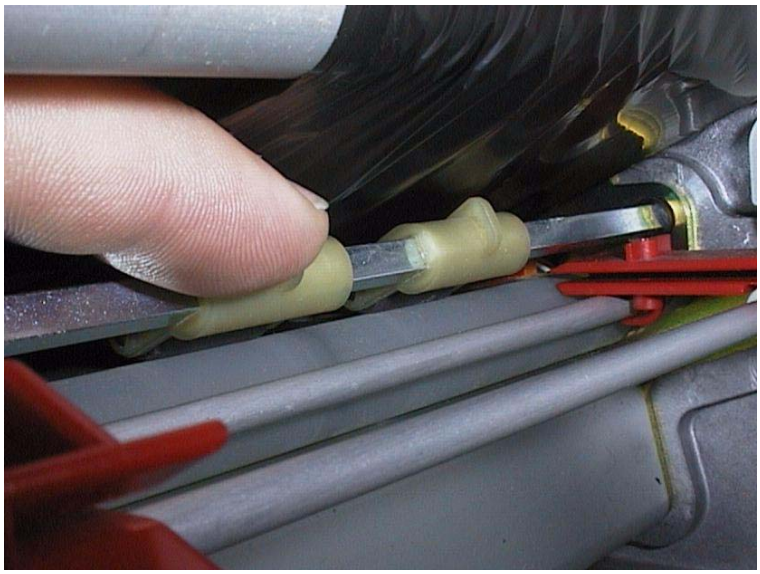
Attention: The label should not be wedged between the guides - it should run easy through the printer.

Adjust pressure roller

- the pressure roller should be adjusted in a way that both of them are running on the surface of the label

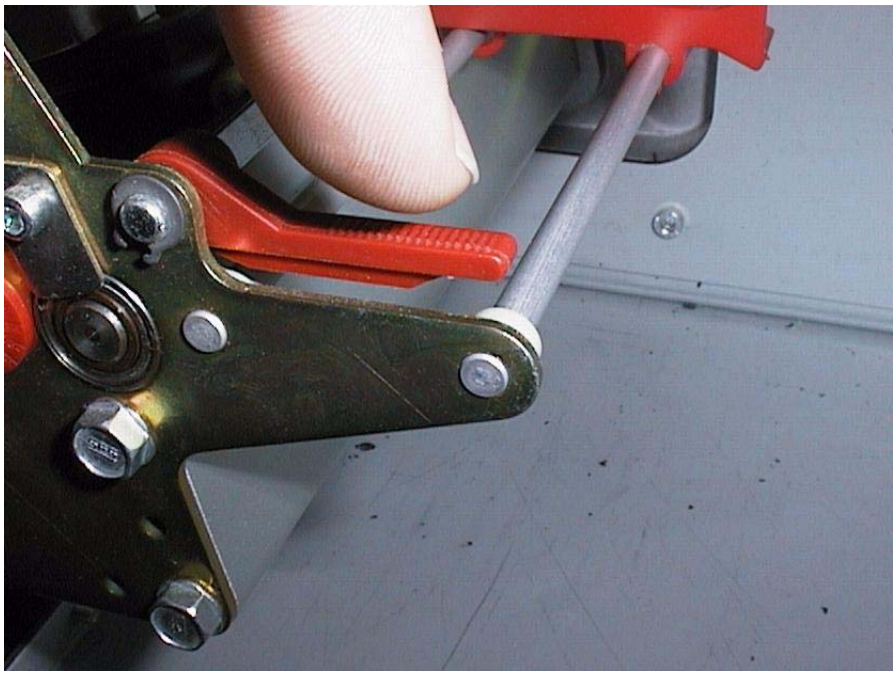


- both pressure roller can be adjusted easy - open the media way by pressing the lever and move the roller to the right position



Remove media

- to remove media - or insert it - press the lever (shown in the picture) slightly down
- it is now possible to move the media in or out



- to remove glue or paper pieces - or paper dust from the blades - please follow the cleaning instructions

Attention: Please never touch the blades with your fingers or metal things like a knife, screw driver or things like that!

Initialise or activate option

- after you have mounted the option correctly to the printer - and the necessary adjustment – the option can be activated

- this can be done by changing the parameter in the firmware

• switch on the unit	display shows	**OFF**
• press FEED and CUT at the same time	display shows	**INFO**
• press CUT until	display shows	**SYSP**
• press ENTER	display shows	**EMUL**
• press CUT until	display shows	**PEPH**
• select until	display shows	**KNIF**
• press ENTER to accept	beep	
• press FEED and CUT	display shows	**SYSP**
• press FEED and CUT	display shows	**OFF**

Attention: The option is now activated - all other option are deactivated!
Never touch the running blade!

Chapter 3 Modes of operation - operation

Modes of operation - operation

- activating the cutter option has deactivated all other option

Attention: If you activate an option not mounted to the printer - can damage you option - and maybe the printer!

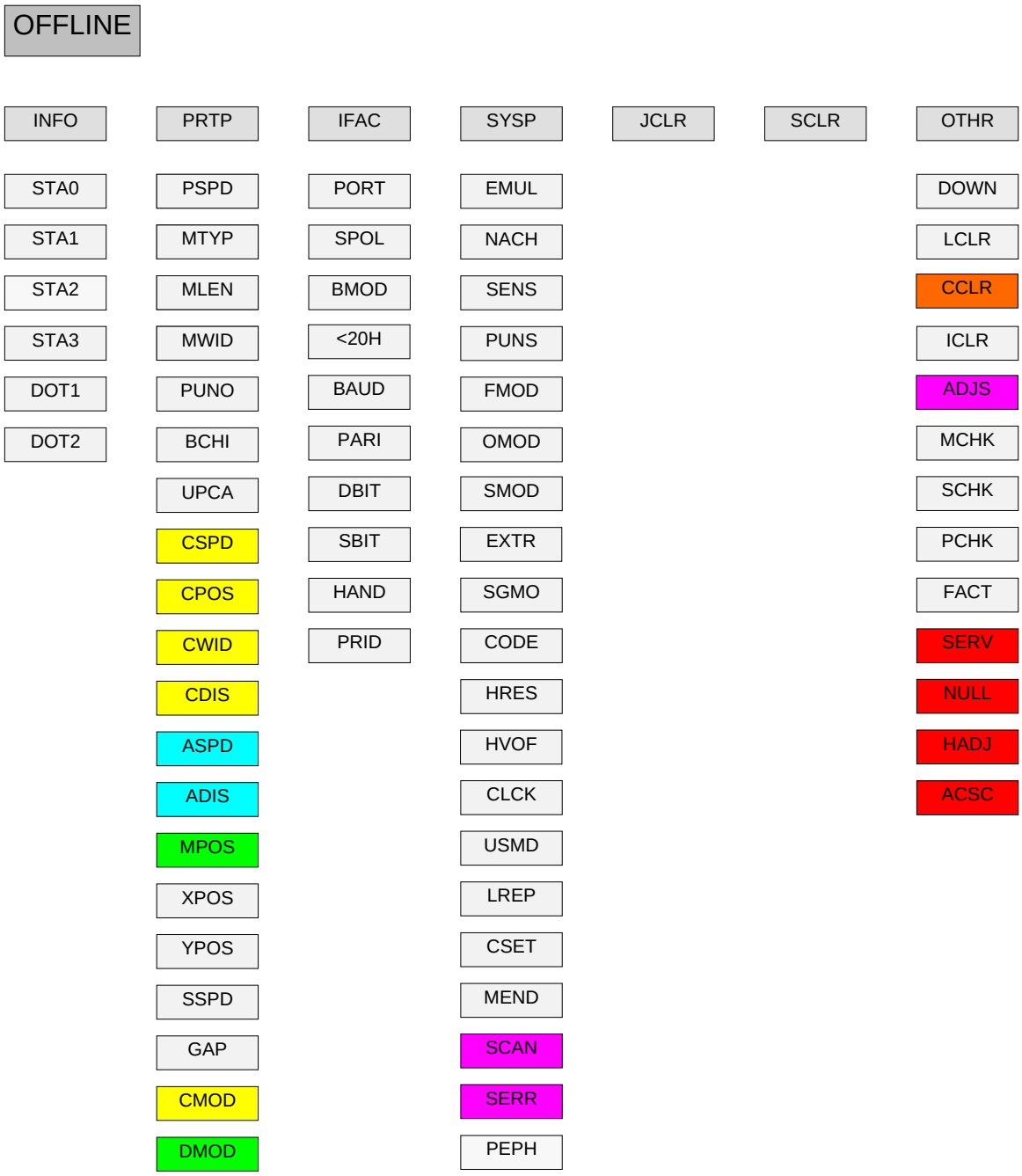
- down loading a print job (the printer has to be ONLINE) - and the cutter option is running
- there are different cut modes available - see chapter 4 (parameter)

Attention: If there is a mail function during normal operation - check if one of the following points are the reason for.

cutter is not operating	check connector (disconnect and connect again) **switch OFF the printer before**
	board is defect (call SERVICE)
ST 14	sensor is not mounted correctly (see above) board or sensor is defect (call SERVICE)
label is not cut completely	check the programmed label width in format or in display
label is bent	check if there is glue or dust on the blade
	mechanical adjustment necessary (call SERVICE)
media is running upper/below the blade	check the unwind system (to hard) check roll weight
two cuts at one position	maybe double cut is selected (check in display)

Chapter 4 Information printout / parameter

Parameter menu



Standard / standard

Nur mit Messer / cutter only

Spender mit Applikator / dispenser with applicator

Für Spender (MPOS – auch mit Abreißkante) / dispenser only (MPOS – tear off as well)

Nur mit Scanner / scanner only

Nur mit Color Option / with color option only

Nur für Service / for service only

Info printout

All INFO printouts (STA0 - STA3) are possible - see user manual printer

Parameter adjustment

- the specific parameter for each option can be adjusted
- the cutter specific parameter are as follow

PEPH	- activate option
CSPD	- speed of cutter
CPOS	- position of cut
CWID	- width of cut
CDIS	- length of piece with double cut
CMOD	- mode of cut

PEPH activate option

The possible option can be activated with this point - if you want to runt the cutter option - you have to select KNIF!

NONE	no option
KNIF	cutter option
TEAR	tear off device
RWND	rewinder
INFD	infeed option
DSPS	dispenser
STAC	stacker

CSPD cut speed

The cut speed can be adjusted to the thickness of the label material

‘**CS.2’**	slow for thick material
‘CS.4’	fast for thin material

CPOS cut position

The exact standard setting of the cutting position is identical with the sensed punch position, i.e. with the beginning of the label. Fine adjustment specific to the customer is programmable via the „CPOS“ function.

Steps: 0.25 mm

‘CP-8’ = -2 mm	Maximum (negative) offset in feed direction
‘CP+8’ = +2 mm	Maximum (positive) offset against feed direction

CWID cut width

The cutting width can be adapted to label width to increase printing speed with narrow materials and ensure perfect separation e.g. of wide labels.

‘W.25’	Minimum cutting width
‘Wxxx’	Maximum cutting width (depending on print head width and spooler configuration, see also printout: STA0

CDIS double cut function

Double cut function for cutting out the punched section or connection ties between labels in order to optimise the label outline.
The first cut is advanced by the set distance from the sensed punch position in feed direction; the second cut is performed at the punch position.
An eventual correction of the cut position (CPOS) applies on both cuts and is to be taken into account.
Graduation: 0.25 mm

‘CD.0’	Regular single cut
‘CDxx’ = 1,0 to 5,0 mm	Activation of double cut function by selection of the distance between both cuts (Note: 1 mm is the smallest possible distance!)

CMOD cut mode

Defines the process of output and cut (starting with version 2.14).

‘N1:1’ At this mode the cut is performed during printing, this will cause a not printable area at the first 18 mm of the label. The label output is at highest level.

‘BTCH’ The full size of the label is printable, the cut is performed during printing, this will cause a slight non imprinted line within the print image of the next label. The label output is at highest level.

Conditions for batch mode are:
- ribbon save feature must be deactivated (parameter ‘FMOD’ = CONT or NONE)
- label length more than 18 mm
- 2 or more labels/cut within a print job

‘R1:1’ The full size of the label is printable, for a cut the label will be advanced to the knife.
After the cut begin of the next label will be drawn back to the print line
This will reduce the label output.

Chapter 5 Maintenance, cleaning and service

Maintenance and cleaning

Attention: Before working on this device - unplug the unit from power!

Adhesive residues are to be removed at regular intervals upon processing of self-adhesive material to ensure perfect material cut and unwinding.

Attention: Pull of mains plug
Be aware of sharp edge of knife which could cause injury.

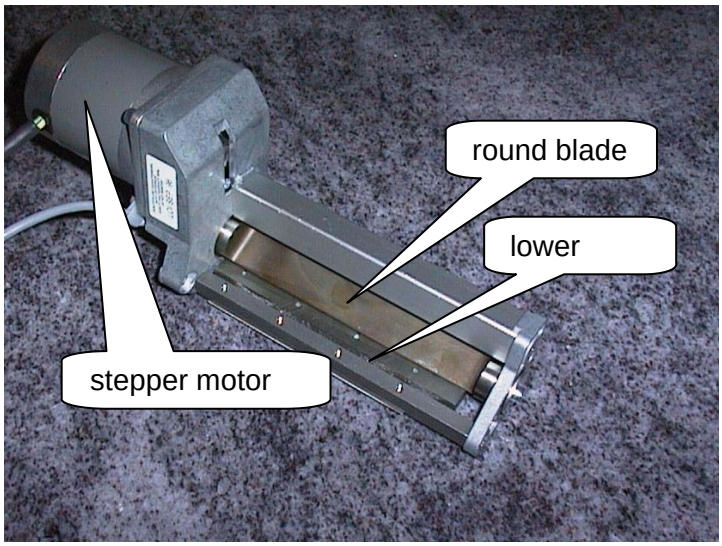
Remove adhesive residues from upper and lower knife; in case slightly swivel knives for better access to the entire edge.
Clean parts with dust-free cloth and cleansing liquor only.

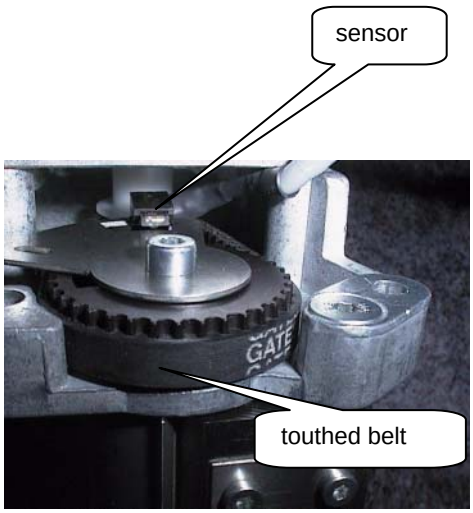
Attention: Never use metal things to clean the blades! They will damage the blades - even if you can not see it!

Service

Spare parts

Spare parts of the cutter device are round blade, lower blade, touthed belt, sensor and maybe the ZSB stepper motor.



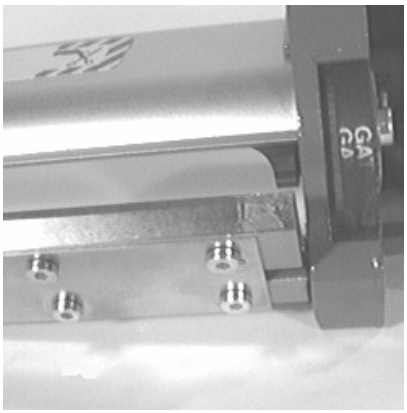


Option board

The cutter can be driven by the option board cutter and applicator

cutter board	98209-xx-3
peripheral board	99054-xx-6

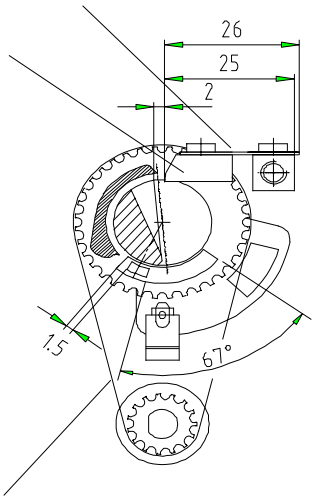
Adjustment circular knife



- stopper of cutter cover has to be 1.5mm away from belt disk cam slot (see drawing below)

- move timing disc to a position (small break through) where the sensor can look through

- aim lower knife to circular knife (slightly) and fix with screws



Check up

- after power on - the cutter is moved automatically to home position – if ST 14 occurs you have to adjust the blades again

Chapter 6 Others

Media specification

The cutter blade cuts self-adhesive, cardboard and synthetic materials up to 240 g/m^2 and a material thickness of 0.9 mm, according to the approvals in the printer specifications.

EXCEPTIONS:

- 8" wide cutters are only approved for materials up to 160 g/m^2 .
- Fiber strengthened materials (e.g. Tyvek) are not subject of the approval.

Status messages

• status messages show on the display the reason for a mail function if this is possible

• you will find following the possible reason for a cutter mail function

ST 04 stacker full

Action: - empty stacker
- (ON/OFF) key - job is further processed

ST 05 media is not more in the gap sensor

from version 1.15 for TTX 650
1.0 for TTX 450/950

Action: Check the length inside your format
press ON/OFF to accept the message

ST 07 foil end

WITH THERMAL PRINT

Action: Make sure that program point ‘FMOD’ is set to ‘NO’
depress (FEED) key display ‘OFF’
disconnect FOIL END RECOGNITION parameter: FMOD
depress (ON/OFF) key display ‘ON’ job is further processed;
punch is activated new

WITH THERMAL-TRANSFER PRINT

Action 1: adjust spring blade at foil unwind core that the core is moving the axle and the foils paper core can be still removed
depress (FEED) key to acknowledge status message display 'OFF'
(ON/OFF) key - job is further processed punch is new activated

Action 2: depress (CUT) key to switch off acoustic signal
depress (FEED) key to acknowledge status message display 'OFF'
insert foil
(ON/OFF) key - job is further processed punch is new activated

ST 08 No punch detected or 3 or more labels missing

Action: check print mask for punch definition
make sure that correct material is inserted
make sure that light barrier is clean
check material guide and light barrier position
(ON/OFF) key - job is further processed punch is new activated

ST 14 Function of cutter is interrupted

Action 1: Check whether knife is sticking by pullout, correct if necessary.

Action 2: Call service technician

ST 21 False format command (between #ER and #Q)#

(Auto-Acknowledgement)

Result: Yet execution of print job

ST 22 Format command without introductory #ER

(Auto-Acknowledgement)

Result: Yet execution of print job

ST 23 Invalid command

(Auto-Acknowledgement)

Result: Command is ignored

ST 26 Inadmissible size or printing offset to punch

(Auto-Acknowledgement)

Result: Size of last format or last printing offset is kept

ST 27 Figure overflow

(Auto-Acknowledgement)

Action: Check whether figures exceed 65000, or format positions exceeding maximum storage capacity are used

ST 28 Character, line or logo do not fit into the physical printing format

(Auto-Acknowledgement)

Result: Characters fitting perfectly into the printing format are printed only

Action: Change positions accordingly

ST 32 Characters are positioned in area limited by the adjusted Batch Mode

(Auto-Acknowledgement)

The position will be shifted automatically in the printable area

Action: change parameter adjustment from Batch mode to R1:1 or N1:1 mode

correct field position accordingly to non printable area.

Status messages

ST 00		ST 15	head sensor not found (system will be locked)
ST 01	NOVRAM error (factory set)	ST 16	applicator home position not found
ST 02	NOVRAM write error	ST 17	dispenser pressure roller not closed
ST 03	no material in SNGL sensor	ST 18	dispenser backing paper rewinder full
ST 04	stacker full	ST 19	applicator – touch down not found
ST 05	material end	ST 20	EASY PLUG wrong command (imedeate)
ST 06	printhead overheated	ST 21	EASY PLUG wrong command between #ER and #Q
ST 07	ribbon end	ST 22	EASY PLUG command without #ER
ST 08	gap not found	ST 23	EASY PLUG not known command
ST 09		ST 24	receive error RS 232
ST 10	ramcard error	ST 25	spooler overflow
ST 11	ramcard error	ST 26	EASY PLUG wrong size or print adjustment
ST 12		ST 27	EASY PLUG counter overflow
ST 13	barcode reading error or media broken for rewinder	ST 28	EASY PLUG field outside print area
ST 14	cut sensor not found, dispenser second feeder, nothing	ST 29	EASY PLUG logo number doesn’t exist

ST 30	EASY PLUG logo buffer to small	ST 45	
ST 31	EASY PLUG logo number error	ST 46	
ST 32	EASY PLUG postbarcode not OK	ST 47	
ST 33	EASY PLUG range command #PA to #IM wrong	ST 48	
ST 34	COLOR PANEL color code not found	ST 49	
ST 35	COLOR PANEL logo does not fit to the card	ST 50	no read of scanner
ST 36	COLOR PANEL color card not found or programmable	ST 51	scanner not programmable (system will be locked)
ST 37		ST 52	stacker full (standard)
ST 38		ST 53	
ST 39	EASY PLUG speedo error	ST 54	
ST 40	receive error RS 232	ST 55	
ST 41	receive error RS 232	ST 56	
ST 42		ST 57	
ST 43		ST 58	
ST 44	ID matrix barcode error	ST 59	acess denied for setting printer to zero

ST 60	memory allocation error (system will be locked)	ST 75	
ST 61	font allocation error (system will be locked)	ST 76	
ST 62	update or numberfield overflow	ST 77	
ST 63		ST 78	
ST 64		ST 79	
ST 65		ST 80	EASY CARD wrong name of file in #FO command
ST 66		ST 81	EASY CARD field number not found
ST 67		ST 82	EASY CARD syntax of #YT or #YB command wrong
ST 68	wrong board installed for selected peripherie option	ST 83	EASY CARD number of data field to big
ST 69	interrupt error (system stands)	ST 84	EASY CARD quantity of variable characters = 0
ST 70	TDI stepper does not respond	ST 85	EASY CARD no card found
ST 71	headstrobe checksum wrong (system will be locked)	ST 86	DATA BASE not enough space for index file
ST 72	speedo system error	ST 87	DATA BASE no possibility to build index file
ST 73	speedo scaling wrong	ST 88	DATA BASE no possibility to sort index file
ST 74		ST 89	DATA BASE barcode onformation nor found in

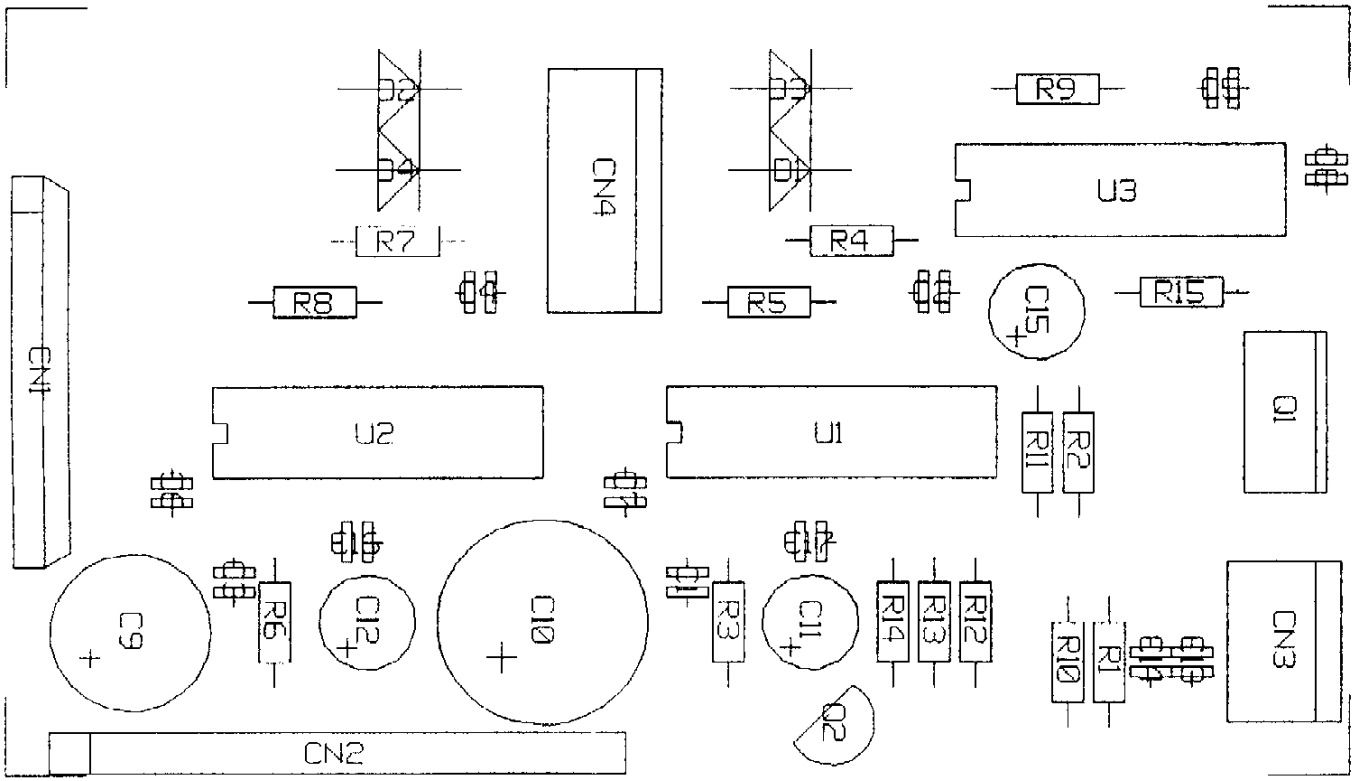
ST 90	database contains identical records
ST 91	barcode not readable
ST 92	
ST 93	
ST 94	
ST 95	
ST 96	EASY CARD undefined error
ST 97	EASY PLUG undefined error
ST 98	INTERFACE undefined error
ST 99	SYSTEM undefined derror
	just warning – self confirming
	must be confirmed by the user

POFF	Power OFF – printer is switched OFF
FAIL	Image card could not be formatted
SCAN	Scanner was unable to decode the information
OPEN	cover open – switch is open
LOCK	the printer is locked
DATA	data receive mode
STOP	printer in STOP mode
SNGL	printer in single start mode
WAIT	printer in wait condition
HOST	printer stopped by host
INIT	printer is initialised
DOWN	TDI table goes up
UP	TDI table goes down
.LDR	printer in loader mode
.EMU	printer in interpreter mode
.SYS	printer in system mode
SORT	data base information is sorted
----	printer was switched on to early after power down
LOAD	barcodes loaded from card

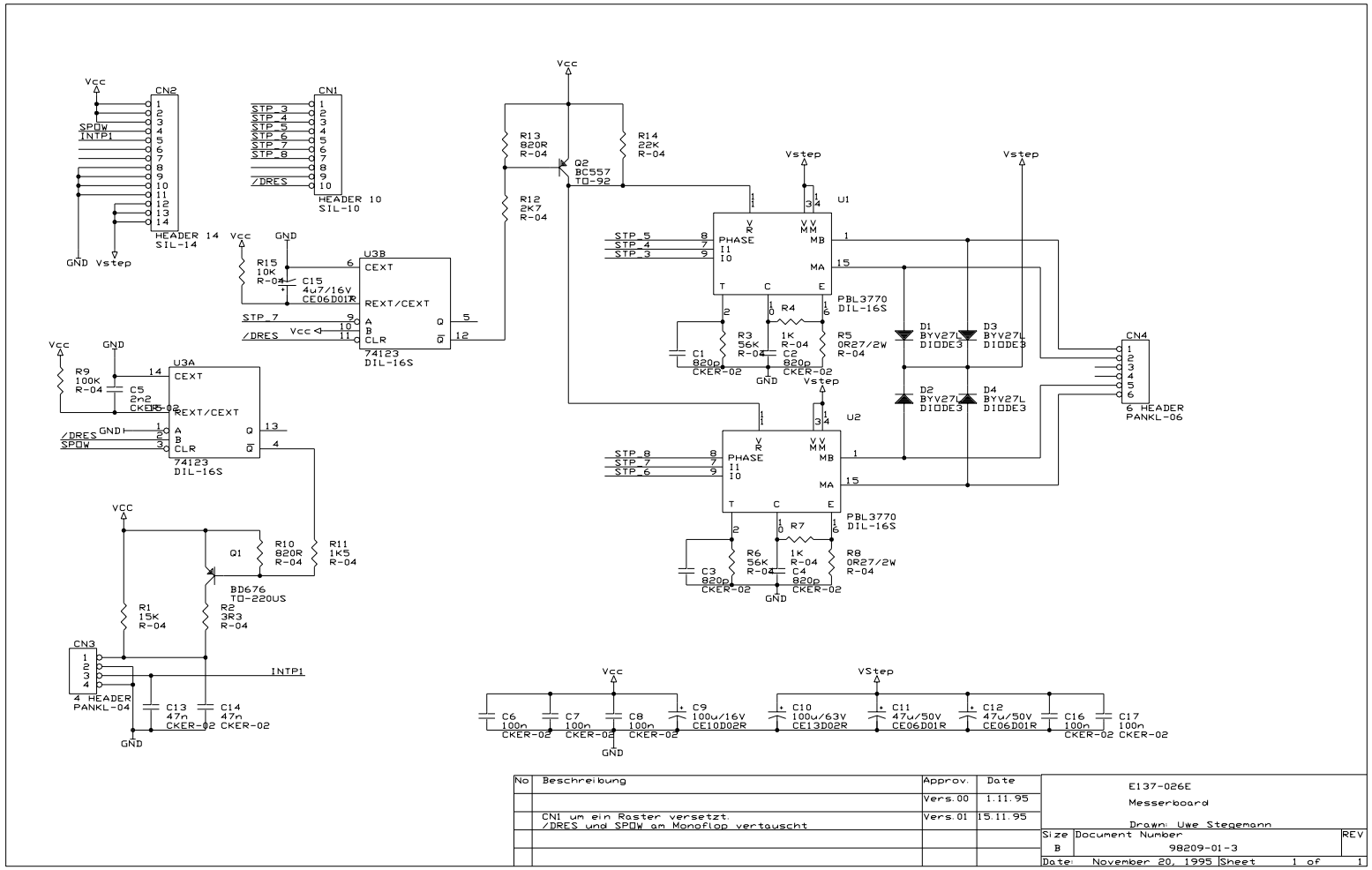
Board - component, board - diagram, wiring

Option board cutter	98684-xx-3 (replaced by peripheral board)
Peripheral board	99054-xx-6

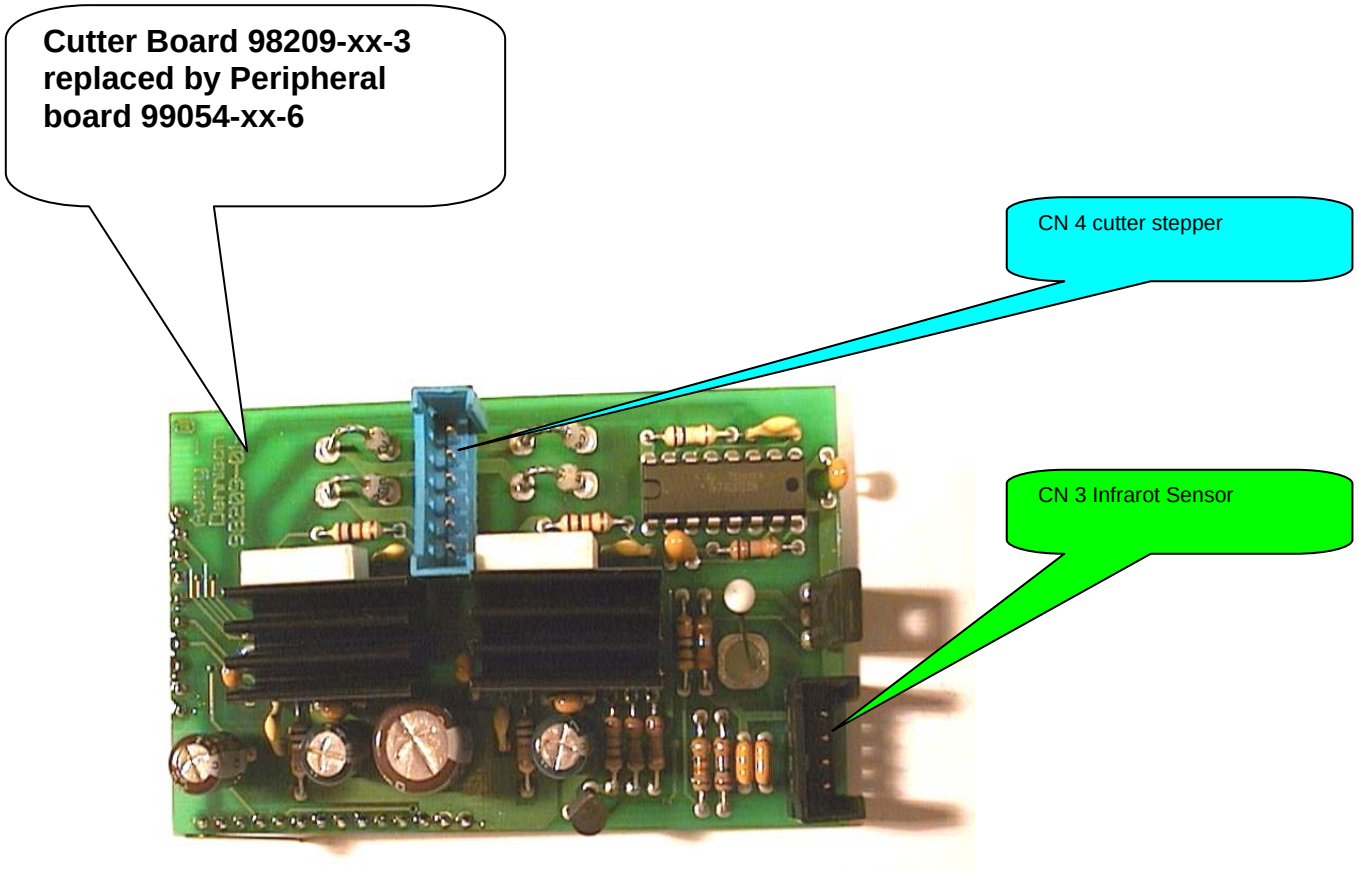
Cutter board component



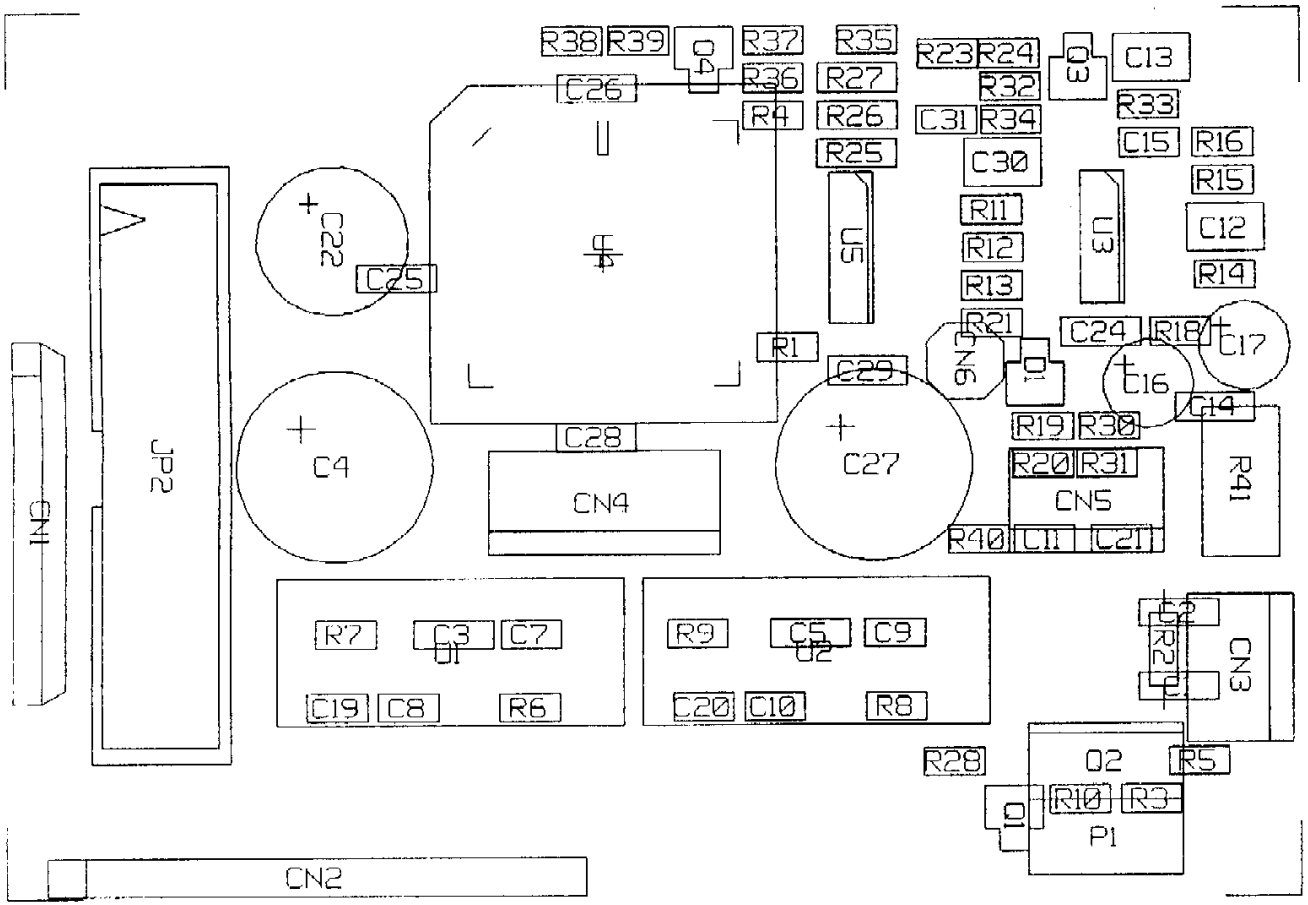
Cutter board diagram



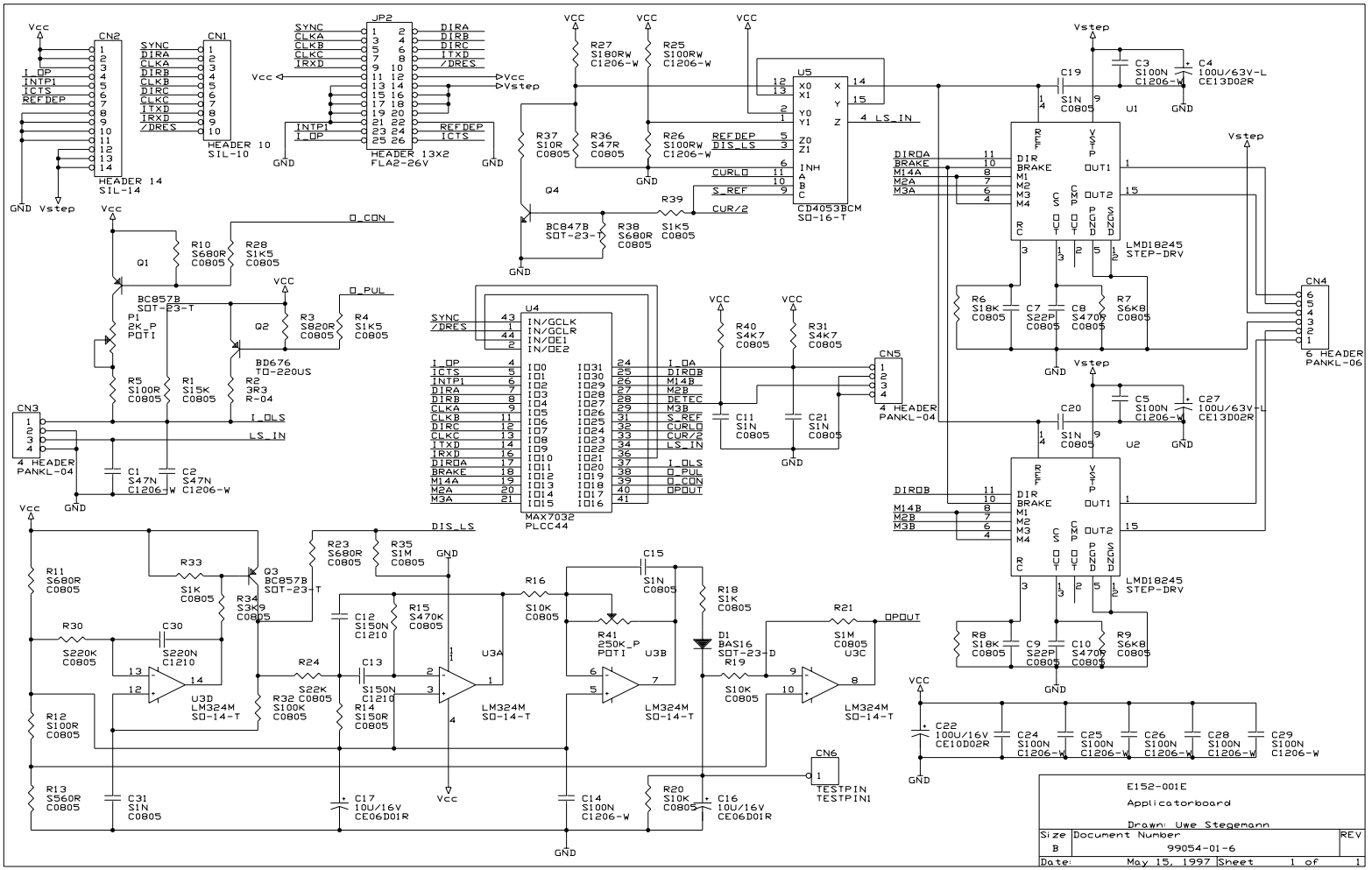
Cutter board adjustment



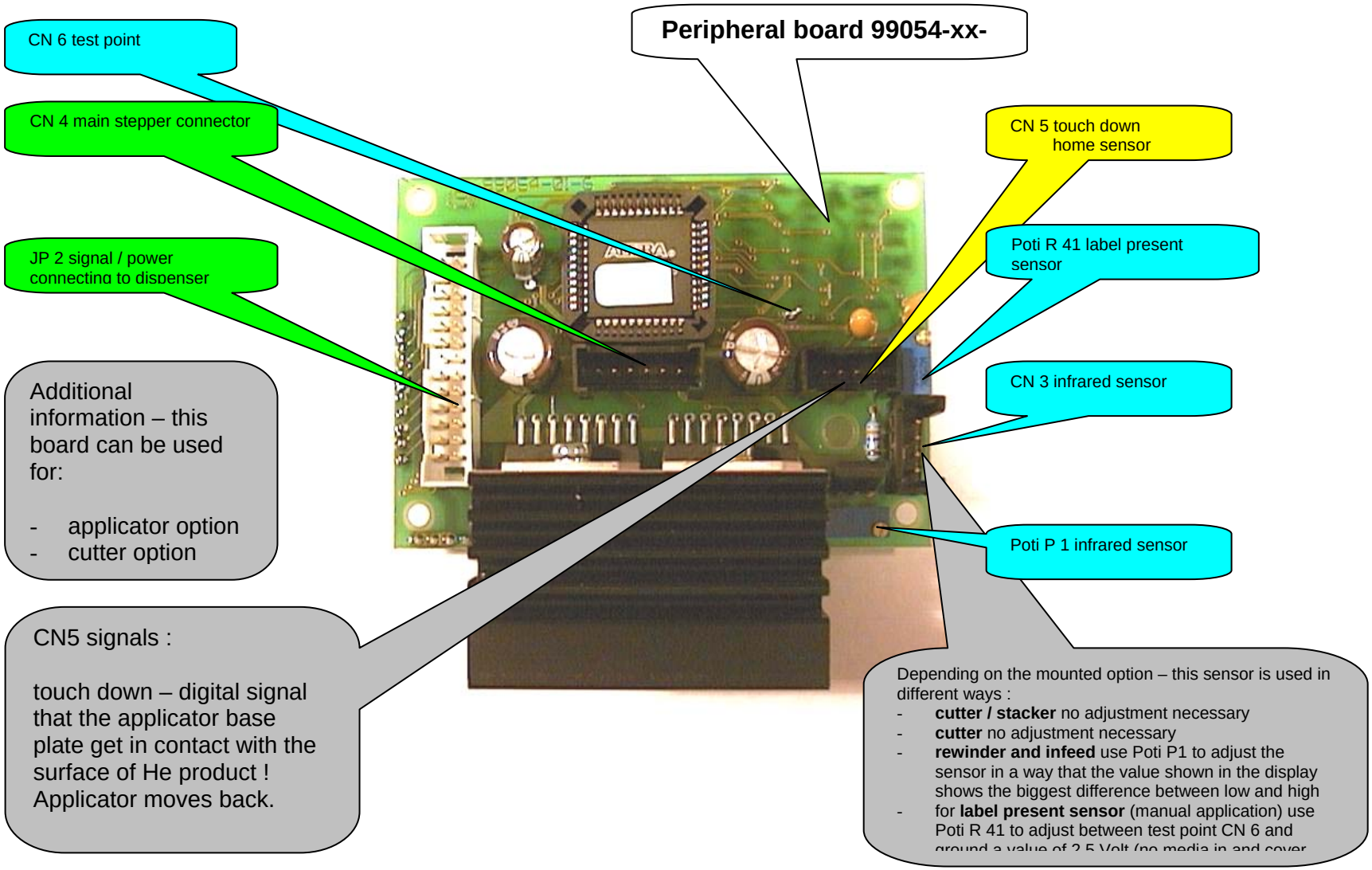
Peripheral board component



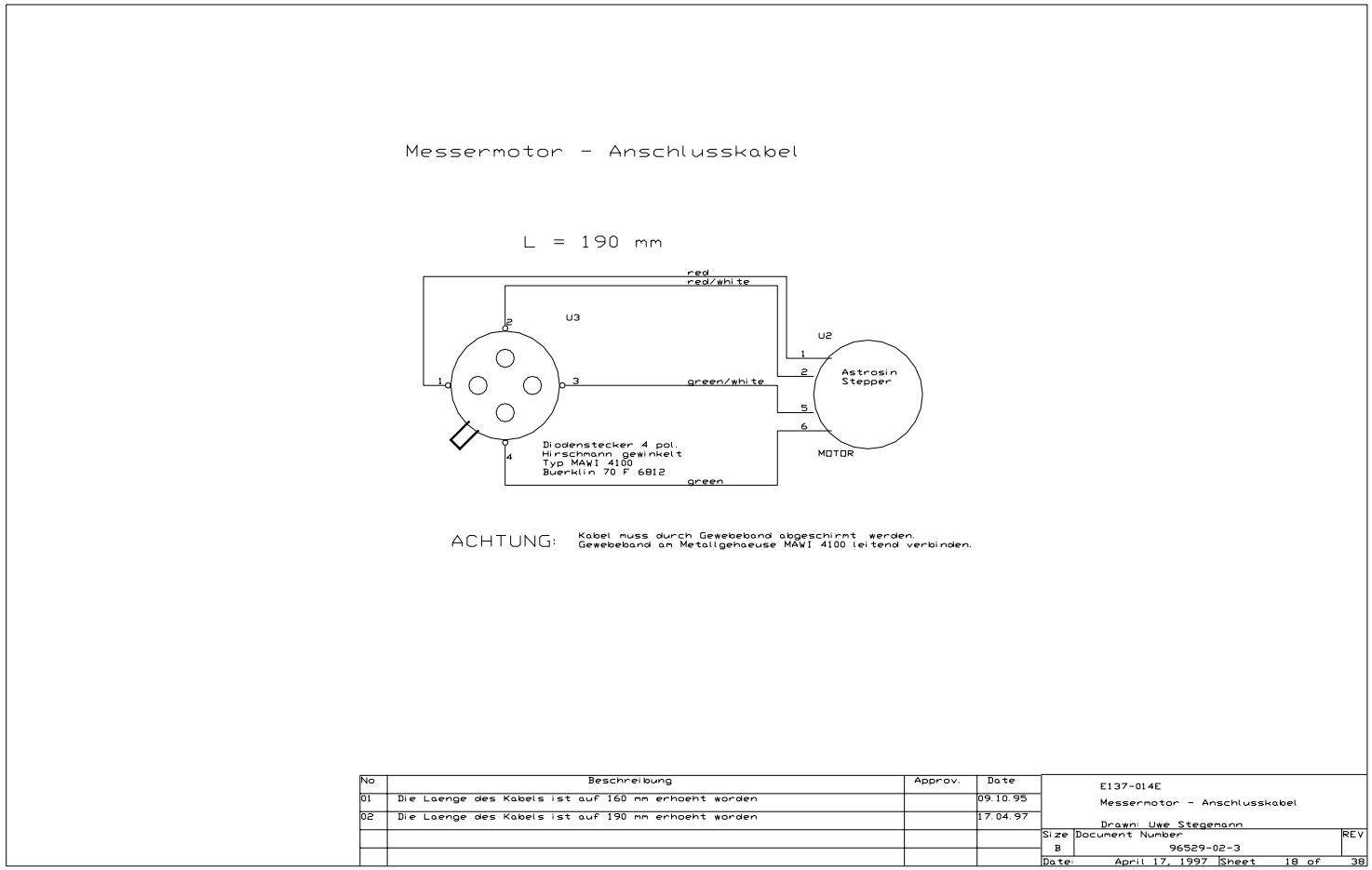
Peripheral board diagram

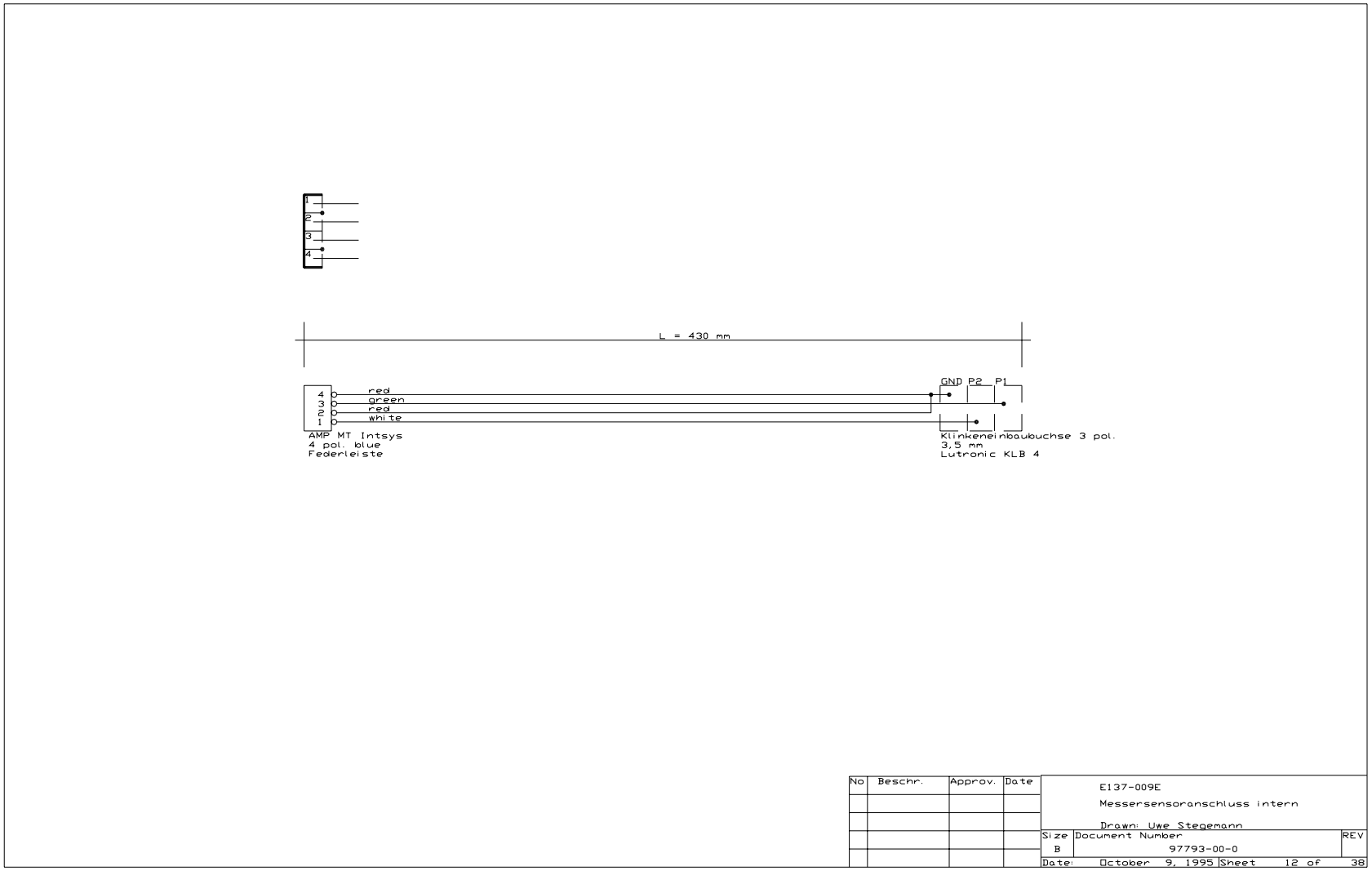


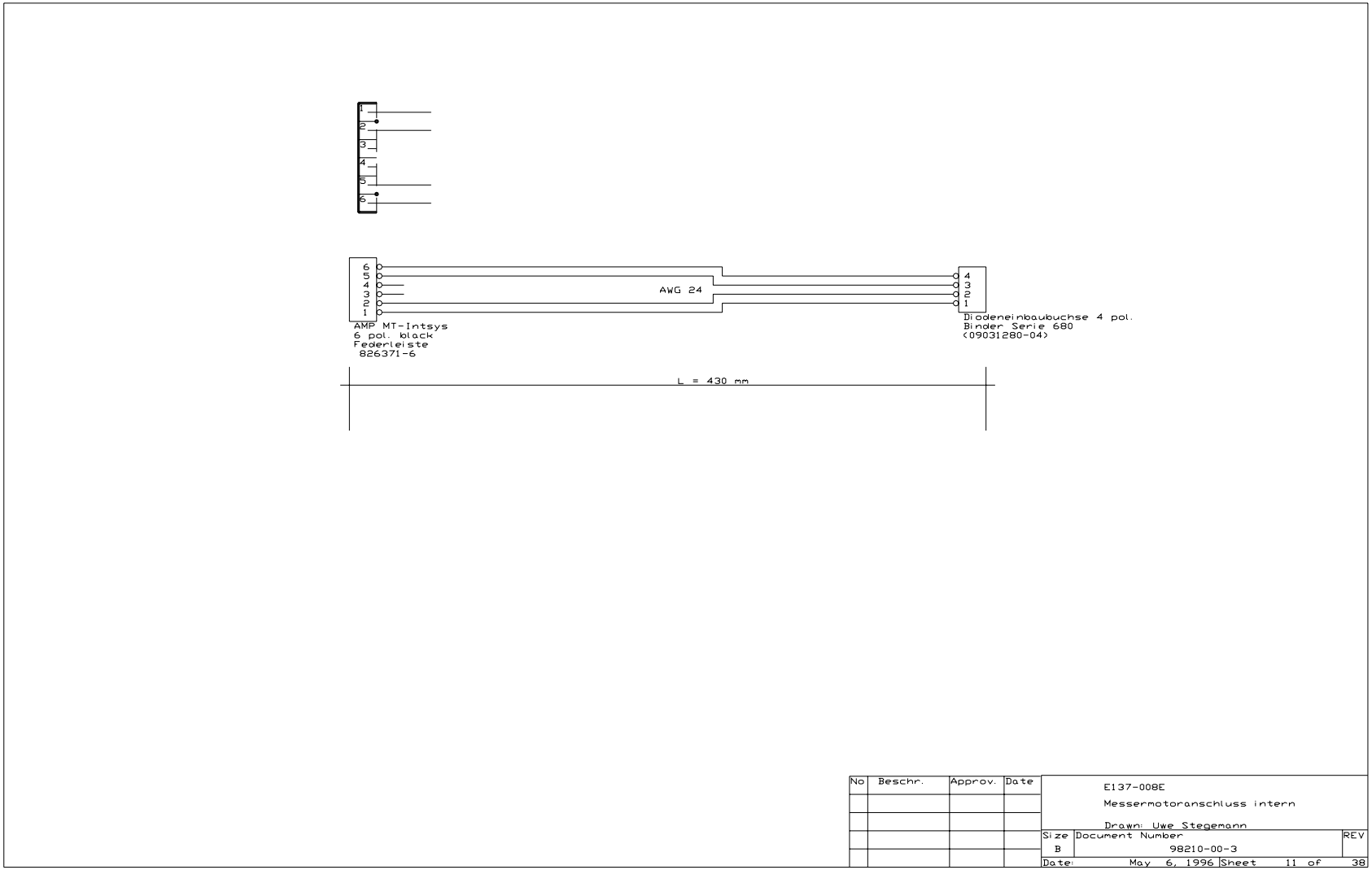
Peripheral board adjustment


Peripheral board 99054-xx-
CN 6 test point
CN 4 main stepper connector
JP 2 signal / power connecting to dispenser
CN 5 touch down home sensor
Poti R 41 label present sensor
CN 3 infrared sensor
Poti P 1 infrared sensor
Additional information – this board can be used for:
- applicator option
- cutter option
CN5 signals :
touch down – digital signal that the applicator base plate get in contact with the surface of He product ! Applicator moves back.
Depending on the mounted option – this sensor is used in different ways :
- **cutter / stacker** no adjustment necessary
- **cutter** no adjustment necessary
- **rewinder and infeed** use Poti P1 to adjust the sensor in a way that the value shown in the display shows the biggest difference between low and high
- for **label present sensor** (manual application) use Poti R 41 to adjust between test point CN 6 and

Wiring


Messermotor - Anschlusskabel
L = 190 mm
red
red/white
U3
U2
1
2
3
4
5
6
green/white
green
Astrosin
Stepper
MOTOR
Diodenstecker 4 pol.
Hirschmann gewinkelt
Typ MAWI 4100
Buerklin 70 F 6812
ACHTUNG: Kabel muss durch Gewebeband abgeschirmt werden.
Gewebeband am Metallgehaeuse MAWI 4100 leitend verbinden.
No
Beschreibung
Approv.
Date
01
Die Laenge des Kabels ist auf 160 mm erhoeht worden
09.10.95
02
Die Laenge des Kabels ist auf 190 mm erhoeht worden
17.04.97
E137-014E
Messermotor - Anschlusskabel
Drawn: Uwe Stegemann
Size
B
Document Number
96529-02-3
REV
Date: April 17, 1997
Sheet 18 of 38


1
2
3
4
L = 430 mm
4
3
2
1
red
green
red
white
AMP MT Intsys
4 pol. blue
Federleiste
GND P2 P1
Klinkeneinbaubuchse 3 pol.
3,5 mm
Lutronic KLB 4
No
Beschr.
Approv.
Date
E137-009E
Messersensoranschluss intern
Drawn: Uwe Stegemann
Size
B
Document Number
97793-00-0
REV
Date: October 9, 1995 Sheet 12 of 38


1
2
3
4
5
6
6
5
4
3
2
1
AWG 24
4
3
2
1
AMP MT-Intsys
6 pol. black
Federleiste
826371-6
Diodeneinbaubuchse 4 pol.
Binder Serie 680
(09031280-04)
L = 430 mm
No
Beschr.
Approv.
Date
E137-008E
Messermotoranschluss intern
Drawn: Uwe Stegemann
Size
B
Document Number
98210-00-3
REV
Date:
May 6, 1996
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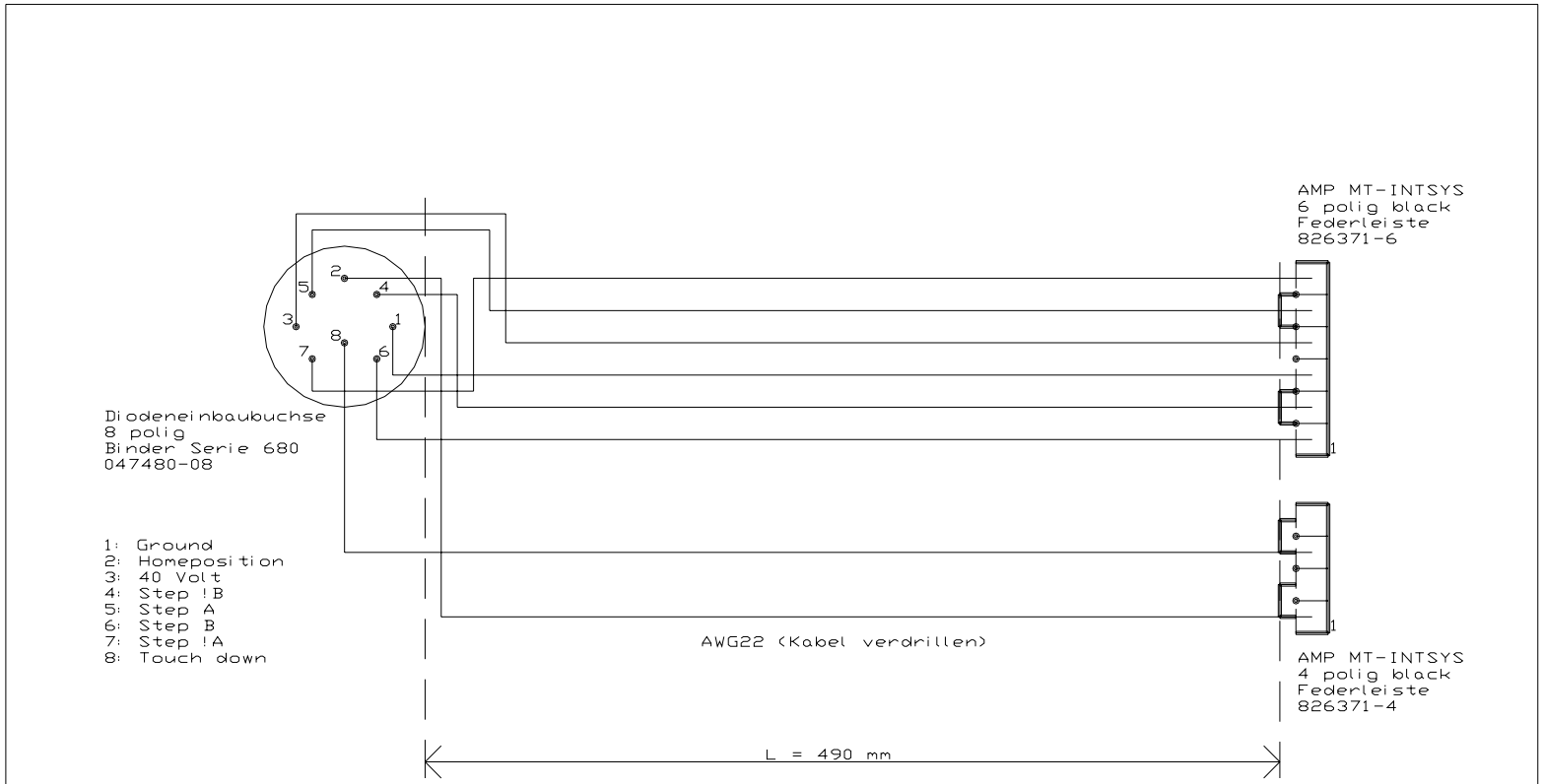


No	Beschreibung	Approv.	Date
01	Austausch des 8 poligen AMP - Steckers gegen einen 6 poligen und 4 poligen AMP Stecker		11.04.97

E152-003E

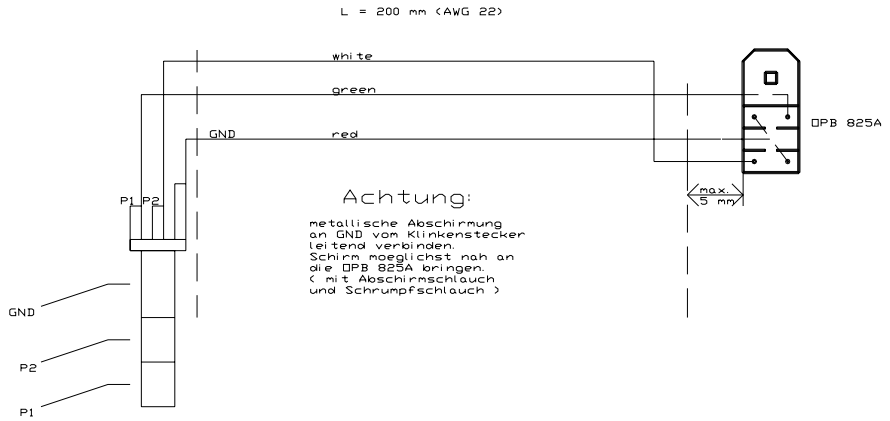
Peripheriecable

Drawn: Uwe Stegemann

Size	Document Number	REV
A	99056-01-6	1

Date: April 24, 1997 Sheet of

Messersensor - Anschlusskabel



No	Beschr.	Approv.	Date
01	Kabellaenge um 50 mm auf 180 mm erhoeht Kabel am Sensor seitlich ausgefuehrt		08.03.96
02	Kabellaenge um 20 mm auf 200 mm erhoeht Klinkenstecker in gerader Ausfuehrung		27.11.96

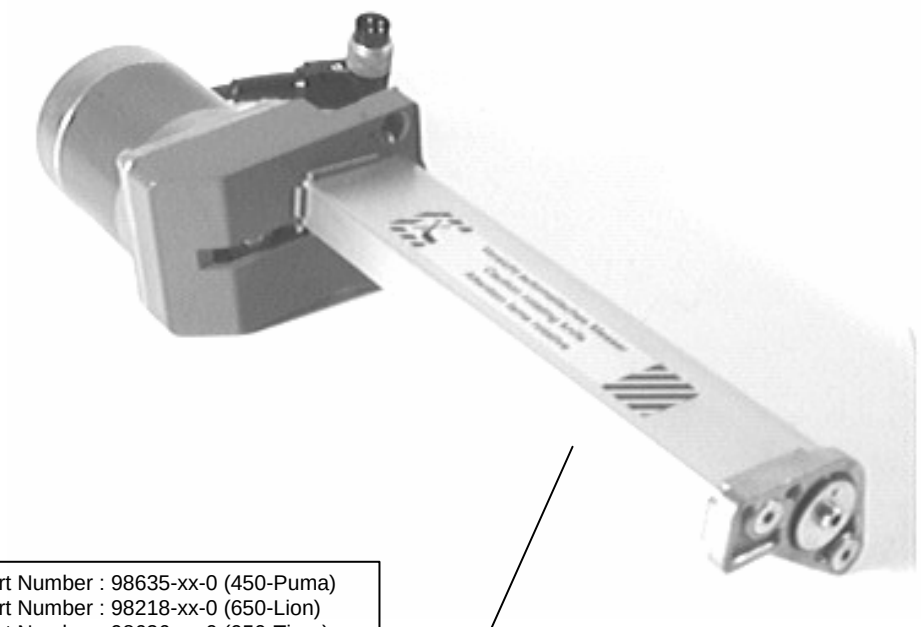
E137-015E

Messersensor - Anschlusskabel

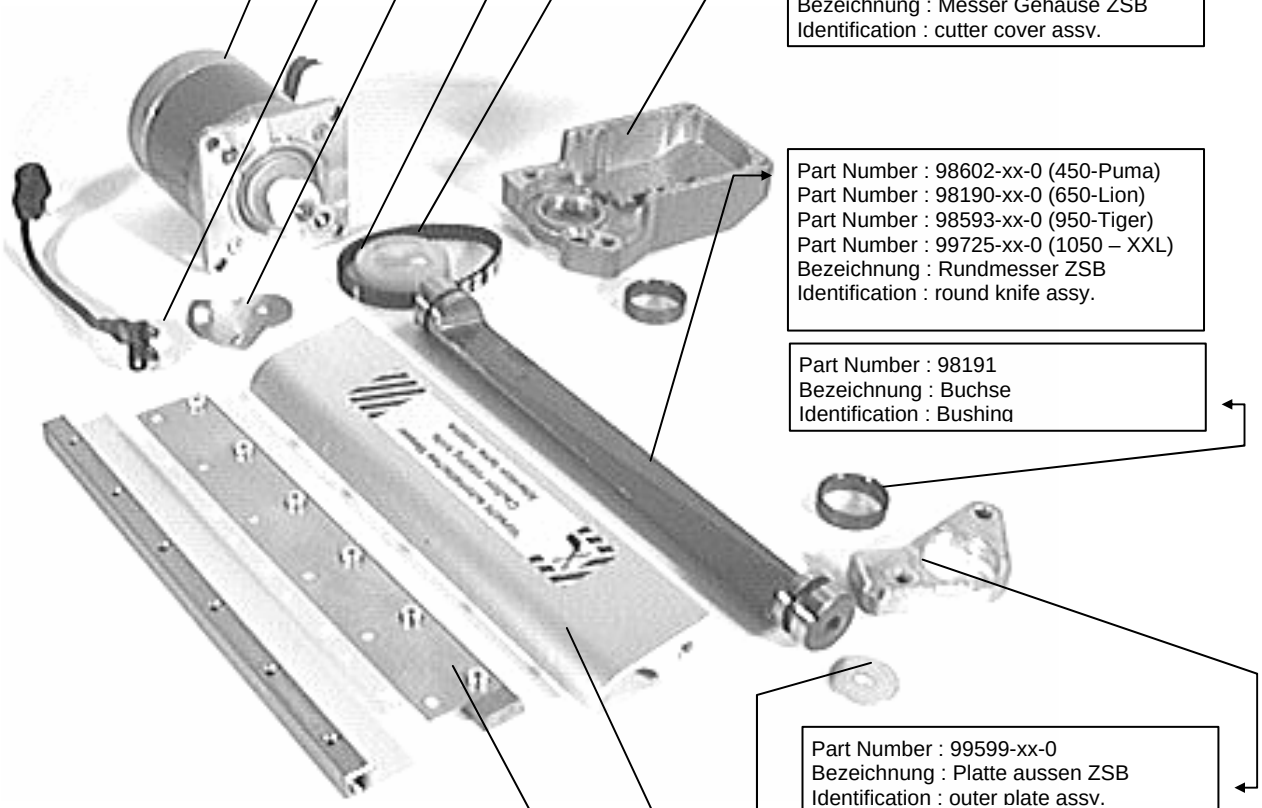
Drawn: Uwe Stegemann

Size	Document Number	REV
B	98206-02-3	2
Date: November 27, 1996	Sheet 33 of 38	

Spare Part



Part Number : 98635-xx-0 (450-Puma)
Part Number : 98218-xx-0 (650-Lion)
Part Number : 98636-xx-0 (950-Tiger)
Part Number : 99930-xx-0 (1050 – XXL)
Bezeichnung : Messer ZSB
Identification : knife assy.



Part Number : 98914-xx-0
Bezeichnung : ZSB Messer Motor
Identification : cutter motor assv.

Part Number : 98206-xx-0
Bezeichnung : Messerlichtschranke
Identification : cutter sensor

Part Number : 98192-xx-0
Bezeichnung : Signalblech
Identification : oszillator

Part Number : 98172-xx-0
Bezeichnung : Zahnriemen
Identification : belt

Part Number : 98150-xx-0
Bezeichnung : Zahnrad
Identification : gear

Part Number : 99592-xx-0
Bezeichnung : Messer Gehäuse ZSB
Identification : cutter cover assv.

Part Number : 98602-xx-0 (450-Puma)
Part Number : 98190-xx-0 (650-Lion)
Part Number : 98593-xx-0 (950-Tiger)
Part Number : 99725-xx-0 (1050 – XXL)
Bezeichnung : Rundmesser ZSB
Identification : round knife assy.

Part Number : 98191
Bezeichnung : Buchse
Identification : Bushing

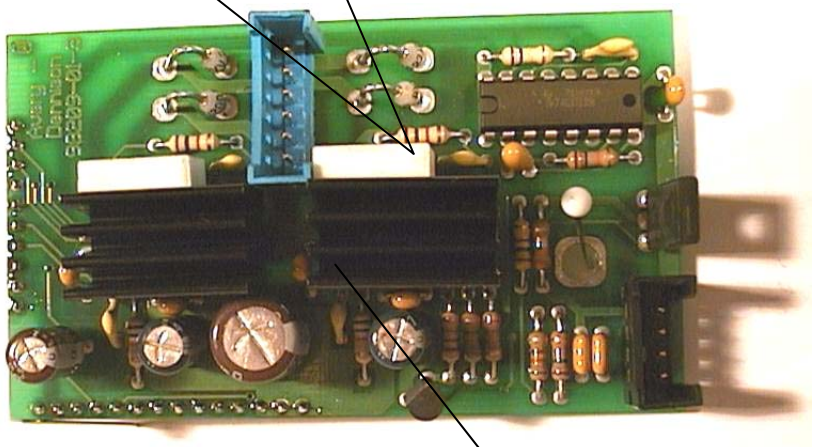
Part Number : 99599-xx-0
Bezeichnung : Platte aussen ZSB
Identification : outer plate assv.

Part Number : DIN H12314,3x20
Bezeichnung : Fixierung
Identification : fixation

Part Number : 98624-xx-0 (450-Puma)
Part Number : 98141-xx-0 (650-Lion)
Part Number : 98591-xx-0 (950-Tiger)
Part Number : 99726-xx-0 (1050 – XXL)
Bezeichnung : Profil
Identification : profil

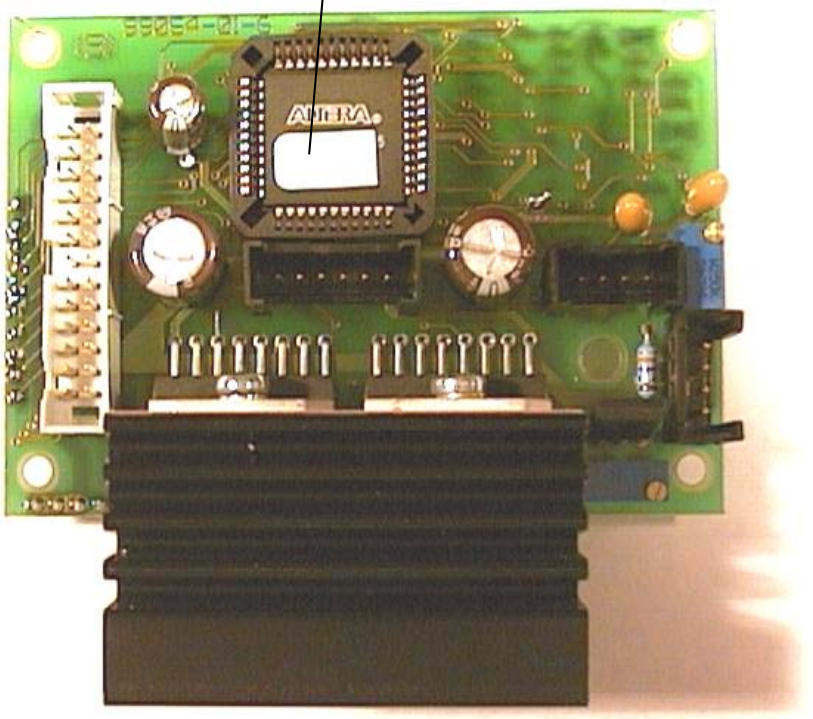
Part Number : 98650-xx-0 (450-Puma)
Part Number : 98316-xx-0 (650-Lion)
Part Number : 98677-xx-0 (950-Tiger)
Part Number . 99931–xx-0 (1050 – XXL)
Bezeichnung : ZSB Untermesser
Identification : lower knife assy.

ersetzt durch Peripherie Platine
replaced by peripheral board



Part Number : 98209-xx-3
Bezeichnung : Messer Platine
Identification : cutter board

Part Number : 99054-xx-6
Bezeichnung : Peripherie Platine
Identification : peripheral board



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